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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/760,586	01/16/2001	Hideyuki Motoyama	FUJH 18.241	4300

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EXAMINER	
BATES, KEVIN T	

ART UNIT	PAPER NUMBER
2155	

DATE MAILED: 08/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/760,586	MOTOYAMA, HIDEYUKI	
	Examiner	Art Unit	
	Kevin Bates	2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 June 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,5-14,16 and 17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,5-14,16 and 17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7-12-06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Amendment

This Office Action is in response to a communication made on June 5, 2006.

The Information Disclosure Statement has been received on July 12, 2006 and has been considered.

Claims 1-2, 5-14, 16, and 17 are pending in this application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 8-14, and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayward (6222848) in view of Beshai (6404735).

Regarding claims 1 and 17, Hayward teaches a SONET/SDH transmission device for connected at a node of a synchronous network of a ring configuration controlling inter-communication between a plurality of LAN segments (Column 1, lines 47 – 50) comprising:

a LAN interface including,

a LAN interface accommodation portion for accommodating LAN segments (Column 4, lines 41 – 45),

a frame converted for converting a frame format to pass the LAN data through the synchronous network (Column 4, line 66 – Column 5, line 5),

a packet switch controller for discriminating packeted LAN data to be directed to a local node or not (Column 8, lines 19 – 28), and if the packet LAN data is for another node, switching to transfer the packets LAN data to the other node (Column 7, lines 43 – 60);

a multiplex/demultiplex part for multiplexing/demultiplexing the packeted LAN data from the LAN interface to a payload of a data frame in a logical path between a high speed SONET/SDH interface and a low speed SONET/SDH interface; and

a SONET/SDH interface connected to the multiplex/demultiplex part having a high speed interfacing function for connecting SONET/SDH transmission device to the synchronous network of ring configuration (Column 8, lines 29 – 48, where the multiplexing occurs when the scheduler moves the packet to one of many queues, which allows the LAN data packets to be combined or separated into a SONET packet payload and sent together along the faster synchronous network ring).

Hayward does not explicitly indicate:

a traffic monitor for monitoring traffic of LAN data which is transmitted from a node to another node of the synchronous network (Column 6, lines 11 – 12),

path selector for switching a transmission path for the LAN data to either a fixed band side or a shared band side according to the traffic of LAN data monitored by the traffic monitor.

Beshai teaches a traffic monitor for monitoring traffic (Column 5, lines 53 – 60) of different types in a synchronous network (Column 7, lines 22 – 26) and that each node is equipped with a path selector and the path selector has the ability for for switching a

transmission path for the LAN data to either a fixed band side or a shared band side according to the traffic of LAN data monitored by the traffic monitor (Column 9, lines 52 –59)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Beshai's teaching of exploiting unused time slots to send fixed band packets on a shared band connection in order to take advantage of those empty slots when the bursty traffic type is not being fully utilized in a network with different types of traffic channels to increase throughput and avoid unused timeslots.

Regarding claim 8, Hayward teaches that said packet switch controller further includes an address learning part, which learns information where the transmission source and transmission detection node number information which is added to a packet sent from another LAN segment, the transmission source and transmission destination address information which the LAN data has, and the communication port information which the packet switch control means has, are associated and stores said association information (Column 5, lines 6 – 19).

Regarding claim 9, Hayward teaches node numbers of the overhead to indicate the transmission source and the transmission destination in said communication control means, a local node number which is preset, is added as the transmission source node number and the node number which is derived by searching and referring to said learned and stored association information on the node numbers, communication ports and addresses based on the transmission destination addresses which the LAN data

bus has, is added as the transmission destination node number (Column 4, line 66 – Column 5, line 5; Column 7, lines 43 – 60).

Regarding claim 10, Hayward teaches that said packet switch control means compares the local number, which is preset, and the transmission destination node number of a packet sent from another node, which is another LAN segment, based on said learned and stored association information of the node numbers, ports and addresses, and the transmission destination packet is received by the local node if the transmission destination node number is the same as the local node number, and a communication port is selected and the packet is transferred if the transmission destination node number is another node number (Column 4, line 66 – Column 5, line 5; Column 7, lines 43 – 60).

Regarding claim 11, Hayward teaches wherein said inter-LAN communication device further comprises: an address learning part which learns and stores data generated in one LAN segment based on said traffic status and routing information added to the LAN data from another LAN segment when the data is transferred to the other LAN (Column 5, lines 6 – 19).

Regarding claim 12, Lu teaches said packet switch control means in the inter-LAN communication device installed in each one of the plurality of nodes of said network further comprises two communication ports, and that the network can be in a ring format (Column 4, lines 31 – 40), but does not explicitly indicate band sharing type inter communication between the plurality of LAN segments is implemented by the cascade connection of the band (path). Beshai teaches a plurality of nodes with inter

node network segments that uses band sharing connections (Column 5, lines 1 – 6; lines 36 – 42). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Beshai's teachings of band sharing in Lu's network in order to allow an the network to implement multiple classes of packets including voice communication (Column 5, lines 17 – 35).

Regarding claim 13, the combination of Hayward and Beshai teaches that said packet switch control means sets a fixed band path of a Point-to-Point connection between specified nodes, so as to guarantee a minimum access band between said nodes (Beshai, Column 8, lines 3 – 26), and the band sharing path is used as a bypass route when traffic exceeds the band of said fixed band (Beshai, Column 5, lines 39 – 42).

Regarding claim 14, the combination of Hayward and Beshai teaches that said packet switch control means always transmits the packeted LAN data for transmission to the band sharing path when only the band sharing type path is used (Beshai, Column 3, lines 52 – 67).

Regarding claim 16, the combination of Hayward and Beshai teaches that said path control means normally sends the packeted LAN data for transmission to said fixed band path when the minimum access band guarantee type is used, and dynamically switches traffic to the band sharing path when said means of monitoring traffic notifies a band overflow of said fixed band path (Beshai, Column 3, lines 52 – 67; Column 5, lines 39 – 42).

Claims 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayward in view of Beshai as applied to claims 1, 8-14, and 16-17 above, and further in view of Takase (5809012).

Regarding claim 2, Hayward teaches the transmission device of claim 1.

Hayward does not explicitly indicate that said communication control means further includes a buffer which stores data transmitted from the LAN segment, and said traffic monitoring means monitors traffic by monitoring the capacity of said buffer which stores data transmitted from the LAN segment.

Takase teaches a ring configuration for a LAN segment network (Column 6, lines 33 – 36) which includes said communication control means further includes a buffer which stores data transmitted from the LAN segment, and said traffic monitoring means monitors traffic by monitoring the capacity of said buffer which stores data transmitted from the LAN segment (Abstract, lines 4 – 17).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Takase's teaching in Hayward's system in order to prevent any buffer from becoming congested and being forced to drop packets (Column 9, lines 42 – 53).

Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayward in view of Beshai as applied to claims 1, 8-14, and 16-17 above, and further in view of Bucholz (5337313).

Regarding claim 5, Hayward teaches the transmission device of claim 1.

Hayward does not explicitly indicate that said communication control means adds a sequence number for each packet at the transmission side so as to prevent a mismatch of the arrival sequence when the communication path is different for each packet due to path switching.

Buchholz teaches a method of identifying a series of packets, which are being transmitted as a data stream and in order to keep that data stream in the correct order, generates packet sequence information in order to allow the destination device to know the correct order of the packets in a data stream (Column 3, lines 36 – 53).

It would have been obvious to one of ordinary skill at the time the invention was made to use Buchholz's teaching of adding sequence information to a series of packets in Hayward's transmission device in order to ensure that the packets sequence can be determined even if path switching alters their order in reception (Column 2, lines 10 – 21; Column 3, lines 48 – 53).

Regarding claim 6, the combination of Hayward and Buchholz teaches said path control means adds a sequence number for each packet after said added node number at the transmission side so as to prevent a mismatch of the arrival sequence when the communication path is different for each packet due to path switching (Buchholz, Column 3, lines 36 – 53).

Regarding claim 7, the combination of Hayward and Buchholz teaches said path control means matches the phases of packets by referring to said sequence numbers and deleting said sequence numbers of the added information at the receiving

side (Buchholz, Abstract, lines 15 – 24; when the packet is received the header is removed and the payload is used at the received node).

Response to Arguments

Applicant's arguments filed June 5, 2006 have been fully considered but they are not persuasive.

The applicant argues that the reference, Beshai, does not disclose an LAN interface including a traffic monitor for monitoring LAN data, because it has a separate node control element that receives traffic measurement data and that the reference, Beshai, does not disclose a path selector for transmitting LAN data either on a fixed band or a shared band.

The examiner disagrees, the reference Beshai discloses that each node includes a node control element (Column 5, lines 15 – 16) and the node control element monitors and notifies the control node about traffic and performance measurements monitored at each individual node (Column 5, lines 53 – 57) this operation is similar to Figure 9 of the instant application, which is a picture of the node of the application and that traffic monitoring part is part of the node (element 25), not necessarily internal to the LAN Interface part as inferred by the applicant's arguments. The reference Beshai also discloses that each node is responsible for path selecting (Column 6, lines 54 – 59) where this path selection is also selecting a service band to rout the packet. Included in these bands are fixed band's which is a connection band is dedicated to a high quality of guaranteed service while the shared band works for low bit rate communication

suited for unreliable connection (Column 8, lines 55 – 67) where the admission control of the node works to choose which path and band to send the received packet along being capable of transferring each packet along the fixed band or the shared band (Column 9, lines 52 – 59).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Bates whose telephone number is (571) 272-3980. The examiner can normally be reached on 8 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571) 272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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August 2, 2006

SALEH NAJJAR
SUPERVISORY PATENT EXAMINER